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ABSTRACT

Managerial approaches to budget planning for state universities were investigated using an open budgeting model that emphasizes the function of communication, technical analysis, and participative decision making. System-level and central officers in 32 research universities were surveyed to determine whether they used and endorsed technical analysis procedures in preparing budget requests to state authorities. Using the Budget Planning Profile, which was developed for this investigation, differences were identified in respondent views about the extent and preference for openness procedures. Results indicated that respondents preferred limited analytical roles for central budget staffs, and vice presidents for academic affairs indicated the least preference for central budget staff activities. A question raised by the findings is whether a more sophisticated analytical staff function is warranted in higher education budget planning processes. (SW)

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OPENNESS IN RESOURCE PLANNING IN STATE UNIVERSITIES

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This paper was presented at the Twentieth Annual Forum of the Association for Institutional Research held at the Peachtree Plaza Hotel in Atlanta, Georgia, April 27 - May 1, 1980. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC Collection of Forum papers.

Mary Corcoran
University of Minnesota
(Editor, AIR Forum Publications)

Abstract

Executive officers in public universities often develop "open" and "closed" managerial styles in preparing budget requests to state authorities. This paper described several attributes of an open managerial model - one emphasizing the functions of communication, technical analysis, and participative decision making - which have been introduced in university budgeting practices. Study outcomes, based on survey data from system-level and central officers in 32 research universities, have identified differences in respondent views about the extent and preference for openness procedures. Results indicating that respondents preferred limited analytical roles for central budget staffs suggested a key managerial question for executive and staff officers: Is a more sophisticated analytic staff function warranted in present budget planning practices?

In the present climate of financial constraint and administrative accountability, institutional budgeting has been characterized as an increasingly significant administrative function, the operating budget having been described by many administrative officers as "the most important educational document in the university." (Lee and Bowen, 1975, p. 58).

This paper discusses characteristics of the managerial style presently used by central officers in developing operational budget requests to state authorities. Findings about the extent and preference among these officers for elements of a proposed "open" managerial approach to budget development have been described. Specifically, the research design, findings, and conclusions of a comparative study of open budgeting practices in 32 public research universities have been highlighted in this paper, emphasis having been placed chiefly on one area of openness: the technical analysis function conducted by institutional research, planning, and budget staffs.

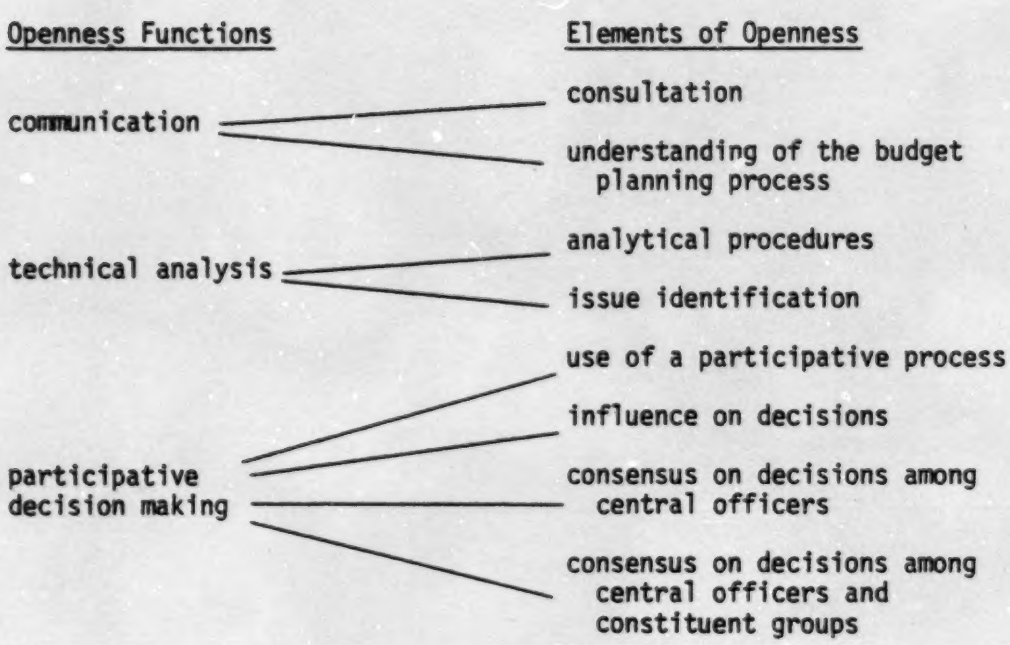
Review of Literature

Openness was selected as the major topic in the present study because the issue of "open versus closed managerial styles" was one of importance to higher education administrators and scholars at the National Research Agenda Conference, ranking first in priority among proposed research topics about the finance, productivity, and management of postsecondary institutions (National Center for Higher Education Management Systems, 1976).

To investigate managerial approaches to budget planning, a model of an "open managerial style", called in this paper the open model of budgeting, was hypothesized. The model was a functional typology, consisting of three primary functions, communication, technical analysis, and participative decision making, and eight related elements, as shown in Figure 1.

FIGURE 1

Functions and Elements of the
Open Model of Budgeting



This model represented what the writer perceived as critical functions in budget development, having drawn chiefly on Burkhead's studies of governmental budgeting practices (1956) and Caruthers and Orwig's description of the technical and political aspects of higher education budgeting systems (1979). Openness concepts reflecting "contingency and open-systems approaches to university management" (Richman and Farmer, 1976) were also emphasized in the model. A practical rationale for the selection and definition of one of the three openness functions, that of technical analysis, will be described in this paper.

The technical analysis function was defined as analytical procedures used by central officers, most often professional budget staffs, to develop and review budget requests. This function has been perceived as integral to budget development in higher education institutions (Lee and Bowen, 1971, 1975; Balderston, 1975), its operational definition in the present study involving two elements: analytical procedures and issue identification.

Analytical procedures were planning activities commonly conducted in university or governmental budgeting processes, such as the preparation of budget instructions, development of planning data or schedules, use of request formats, preparation of staff analyses or recommendations, and identification of review and decision criteria. (LeLong, 1971; Lee and Bowen, 1971). Similarly, the identification of issues such as enrollment trends, faculty workload, or program costs, has been found to be a consistent activity in the budget processes of higher education institutions (Caruthers and Orwig, 1979; Glenny, Bowen, Meisinger, Jr., Morgan, Purves, and Schmidtlein, 1979).

Specific questions about each of these and related technical analysis procedures were included in the study's survey instrument.

The open model, emphasizing communication, technical analysis, and participative decision making function, represented a hypothesized view of budget development not previously proposed or applied in higher education institutions, but thought nonetheless to be a useful inquiry approach to present budgeting practices.

Design

A comparative survey design with statistical data treatments was used in the present study to investigate major research questions about the open model of budgeting, emphasis in this paper having been placed on two questions about the technical analysis function: 1) Have central officers in state universities used and endorsed technical analysis procedures in preparing budget requests? and 2) Have such analysis procedures been related to each other in meaningful or significant ways?

To measure responses to these questions, two approaches to gathering and analyzing data were used. The study sample and respondents were identified first through a preliminary survey, the purpose of the survey being to select respondents with expertise who had primary responsibility for budget planning in major state universities. These surveys were sent to the Directors of Budget, Planning, and Institutional Research offices in 48 major state universities classified by the Carnegie Commission on Higher Education (1973) as Research I and II institutions. Respondents completed 47 of 48 surveys in useable fashion, two-thirds having identified 32 central budget staff officers (CBS') and 28 vice presidents for finance, administration, or planning (VPF's),

to whom the staffs usually reported, as respondents in the study. The remaining respondents, 36 chancellors or vice presidents for academic affairs (VPAA's), were chosen from the same institutions as had been the staff members, having been identified in a federal government directory (National Center for Educational Statistics, 1977). Through these procedures, 96 senior officers in the central administrations of 32 large public universities were identified as study respondents.

These respondents were subsequently sent a 32 question, final survey, the Budget Planning Profile (BPP). Developed especially by the writer for the present study, the BPP consisted of closed, multiple choice questions, using Likert-type scales, which probed the respondents' knowledge and preference for open budgeting practices at their institutions. This attempt to identify "what was" and "what should have been" followed a procedure used by Gross and Grambsch in their studies of institutional goals (1974).

To provide initial measures of central tendency and variability for all BPP responses, mean, standard deviation, frequency, and percentage scores were prepared using computerized programs. The analysis of variance procedure ANOVA (Nie, Hull, Jenkins, Steinbrenner, and Bent, 1975) assessed the level of significance associated with the mean scores of the three respondent groups, a similar manually performed procedure, Fattu's nomograph (Office of Educational Research, University of Minnesota, 1946) having been utilized to test the significance of differences between group percentages. These procedures suggested uniformity and trends in respondent views about a key question of the study, whether technical analysis procedures had been used and endorsed by central officers in the sample institutions.

Measures of correlation and association were applied subsequently to initial findings to assess relationships among study variables, revealing, in particular, areas of interest for further inquiry. Two-way crosstabs and phi, product-moment, and point-biserial correlation coefficients (Fruchter and Guilford, 1978) were calculated among variables, some of which had been identified for these analyses through principal factor analysis procedures (Nunnally, 1978). These inferential statistical treatments provided insights about the second study question described in this paper: have technical analysis procedures been related in meaningful or significant ways?

Limitations

Since the present study used a survey instrument, the BPP, limitations were inherent in the design primarily with respect to the accuracy of data from limited sampling groups, the reliability and validity of the survey instrument, the efficiency of data tabulation and computerized statistical procedures, and the potential generalizability of study findings beyond the samples used. The effects of these limitations were modified in part through the use of several techniques: pretesting of the survey instrument, the relatively broad and contrasting survey of expert observers, use of established inferential statistical treatments, and standardization of the data using commonly accepted rules for analyzing data.

Results

Almost two-thirds (63.5%) of the 96 respondents returned completed and useable BPP surveys, at least two completed surveys having been received from respondents at 29 of the 32 sample institutions. Return rates among respondent groups were as follows: half of the 36 VPAA's, two-thirds of the 28 VPF's, and three-fourths of the 32 CBS'. Most of those who did not participate in the

survey indicated two reasons for such refusal: they had either recently assumed their positions and were thus not familiar with past budgeting practices or they felt the survey questions were inappropriate to their system level procedures.

Computations utilizing ANOVA procedures and Fattu's nomograph indicated few statistically significant differences among group responses, chance fluctuation for group samples or variability in sample sizes having accounted for variations observed. However, differences among respondent groups about the use and preference for technical analysis activities, the openness function highlighted in this paper, were noted frequently.

Over three-fourths of all respondents perceived and preferred that central budget staffs conduct several analysis functions, such as the preparation of budget instructions; development of planning data and schedules; assessments of the attitudes and priorities of state authorities about institutional budget proposals; and analysis of critical budget issues, the most significant being the annual percentage increase in the faculty pay plan, enrollment trends and overall quality in instructional programs, and the saleability of budget requests to state authorities.

Findings indicated that VPF's and CBS' appeared to favor additional responsibilities for budget and planning staffs, VPAA respondents less so. For example, two-thirds of the administrative vice presidents and CBS' indicated that staffs "should prepare" suggested priorities or rankings of budget requests as well as meet with chief executive officers (CEO's) to assess the effectiveness of the budget planning process; less than 50% of the VPAA's favored these staff activities. VPF's and CBS' also indicated that staffs "should usually attend"

meetings between VPAA's and deans to discuss budget proposals, VPAA's indicating that such attendance was "sometimes" appropriate. A related finding was that two-thirds of the VPF's and CBS' indicated that the chief financial, administrative, or planning officer, to whom three-fourths of the CBS' in the sample reported, "should have" primary responsibility for coordinating the internal budget process, a similar percentage of VPAA's favoring the chief executive officer for this role.

These findings suggested perceptible, if not necessarily statistically significant, differences in views between the VPF's and CBS', who were usually trained and experienced in financial and administrative roles, and the VPAA's, whose career patterns and preparation were primarily academic in nature.

The findings also indicated, however, that CBS' views on many questions differed from those of the VPF's or both groups of vice presidents. For example, approximately 70% of the CBS' and VPAA's indicated that faculty budget committees "should prepare" recommendations about major budget-related issues, request priorities, and procedures defining the consultative roles of the faculty; however, a majority of the VPF's favored such faculty recommendations on only one item, budget-related issues.

Similarly, two-thirds of all vice presidential respondents perceived that a participative process, one involving bargaining, negotiations, and compromises among central officers and constituent groups, was used in making eight of the 13 budget-related decisions identified in the BPP inventory; a like percentage of budget staff officers indicated, however, that such a process was used only in making two decisions. Vice presidential respondents also differed with CBS' in

assessing the extent of influence by constituents on budget-related decisions, as shown in Table 1. Though the respondents rarely perceived "much" or "extensive" constituent influence on budget decisions, VPF's and VPAA's cited "some" influence more often than did CBS'.

Though the CBS' tended to favor a more active role for themselves in budget planning processes, few indicated a strong preference for rigorous analytical activities: approximately 35% of the CBS' suggested that formal budget hearings "should be held" by the central officers, hearings at which CBS' typically could be expected to question and debate budget proposals presented by constituent groups; half of the CBS' favored staff preparation of written reviews of selected requests, only one-third preferring such reviews on all budget proposals; and slightly more than half of the CBS' favored the development of staff recommendations on funding levels for all or selected requests.

Implications about the use of technical analysis procedures were identified through correlational analyses, emphasis in this paper having been placed on relationships between staff activities and other openness elements. Selected findings have indicated, for example, that the preparation of planning data, such as historical faculty staffing patterns or estimates of institutional revenue, tends to promote issue identification, contributing also to the broadening of knowledge which constituent groups possess about budget procedures and request priorities.

These findings have also indicated that central officers tend to gain support for budget decisions from constituent groups 1) when they help constituents understand the major administrative and support roles of the budgeting

Table 1 Extent to Which Budget-Related Decisions were Influenced by the Internal Constituent Groups of the University

■ Vice Presidents for Academic Affairs (N_1=18)
Δ Vice Presidents for Finance/Administration (N_2=19)
● Central Budget Staffs(N_3= 24)

Decisions Reached About	Extent of Influence[a]				
	No	Very Little	Some	Much	Extensive
The annual percentage increase in the faculty pay plan	1	2 ●	3 Δ ■	4	5
The dollar size of the faculty pay plan	1	2 ●	3 Δ ■	4	5
The identification of funding priorities in the total budget request	1	2 ●	3Δ ■	4	5
The nature of the consultative process with the faculty	1	2 ● Δ	3 ■	4	5
The total number of academic positions requested	1	2 ●	■ Δ 3	4	5
The criteria used by the chief executive officer and the vice presidents, as a group, in reviewing budget requests	1	2 ■	Δ ● 3	4	5
Student tuition policies or rates	1	2 ●	■ Δ 3	4	5
The dollar size of the total budget request	1	2 Δ●■	3	4	5
The strategy for presenting the budget request to state authorities	1	2 ■Δ●	3	4	5
The mix of academic and civil service positions requested	1	2● Δ ■	3	4	5

[a] Mean scores for each sample group. Significance of differences between high and low means using ANOVA has been indicated by an asterisk(*) at the .05 level of probability. Summary statistics may be obtained from the writer upon request.

process, including those of budget staffs, and 2) when they introduce technical analysis procedures in budgeting, such as the development of planning data, budget request and issue analyses, review criteria, and faculty budget committee recommendations.

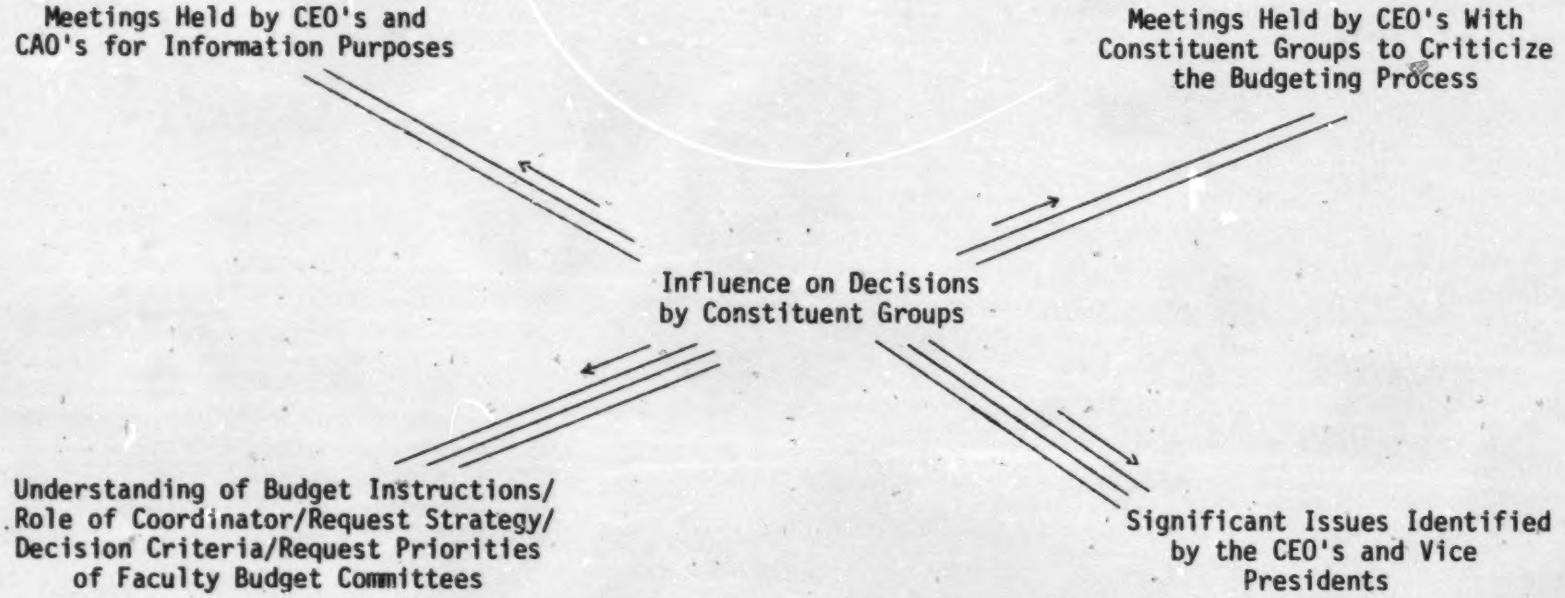
Additional correlational analysis appeared to suggest that constituent groups perceived themselves to be influential in budgeting processes 1) when they were involved in preliminary meetings with CEO's and chief academic officers (CAO's) to discuss initial budget proposals and 2) when they met with CEO's to criticize the budgeting process, as shown in Figure 2. Similarly, the findings suggested that understanding among constituent groups about budget items, such as decision criteria, issues, priorities, and request strategies could well be expected to lead constituents to feel that they have influenced the process and its products. At least, the correlational analyses applied to survey data in this study indicated that such findings were tenable.

Discussion/Conclusions

Study findings presented in this paper tend to suggest that central budget staffs possess limited responsibility for conducting technical analysis procedures in university budget planning processes. Though staffs typically prepare items essential to budget development, such as instructions, planning data, and issue analysis, they infrequently engage in rigorous analysis of budget proposals, offering few written reviews, proposed rankings, or specific recommendations about budget requests. This general emphasis on procedural rather than analytical roles for staffs appeared to be endorsed by most respondents, VPAA's indicating the least preference for budget staff activities.

FIGURE 2

Relationship of Influence on Decisions by Constituent Groups to Consultation, Understanding, and Significant Issues of the Planning Process[a]


Meetings Held by CEO's and CAO's for Information Purposes
Meetings Held by CEO's With Constituent Groups to Criticize the Budgeting Process
Influence on Decisions by Constituent Groups
Understanding of Budget Instructions/ Role of Coordinator/Request Strategy/ Decision Criteria/Request Priorities of Faculty Budget Committees
Significant Issues Identified by the CEO's and Vice Presidents

[a] Relationships shown exceeded the five percent level of significance based on point-biserial (═══) and product-moment (═══) correlation coefficients. Summary statistics may be obtained from the writer upon request.

These findings appear to be consistent with previous studies about budget staff roles in higher education institutions. Lee and Bowen (1971) and LeLong (1971) have indicated that budget staffs typically prepare planning data, develop formulas, and maintain liaison efforts with state authorities. These efforts were frequently comparable to the data gathering and review functions of professional staffs in many state government and higher education coordinating agencies (Glenny et al, 1975), but far more limited, for example, than the broad and critical analysis procedures routinely conducted by budget staffs in the federal government's Office of Management and Budget (Lee Jr., and Johnson 1973) or counterparts in the Congressional Budget Office (Havemann, 1978).

Consistent and occasionally significant differences in perception and preferences among respondent groups might suggest, however, that much concern or unresolved conflict about the roles of central budget staffs exists in higher education institutions. Vice Presidents, particularly VPAA's, might well believe that critical budget review and decision influence or its appearance must more generally rest with executive officers, rather than with professionally trained or appointed budget staffs whose perceived values, expertise, backgrounds, and styles might have been inconsistent with their own. In previous studies, for example, both Glenny (1972) and Baldridge and associates (1978) have warned against the existence of undue influence by technical and budget staffs in university governance and management functions.

Correlational findings of this study have suggested, however, that analytical efforts might very well contribute to the identification of critical budget issues, promote understanding of the process among constituent groups,

and encourage support for budget decisions made by executive officers. The use of analytical procedures, in other words, might contribute to a more open process, if desired by executive officers, resulting also in the wider use of professional budgeting practices endorsed by many public administration scholars and practitioners.

One of the questions raised by the present study, therefore, appears to be: Is a more sophisticated analytical staff function warranted in higher education budget planning processes? Continuing discussion among executive officers and staffs, based on a closer examination of existing research findings, present institutional practices, and further empirical inquiry into this matter might suggest positions which could appeal to both central officers and constituent groups.

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